

PATENT APPLN. NO. 10/529,847  
RESPONSE UNDER 37 C.F.R. §1.111

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REMARKS

In the Action, claims 1, 8 and 13-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Aoyama et al., US 6,365,659 ("Aoyama"), in view of Naylor et al., WO 97/47675 ("Naylor") combined with Kato et al., US 6,680,353 ("Kato"). Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Aoyama in view of Naylor combined with Kato, and further in view of Uchida et al., US 6,670,030 ("Uchida"). These are the same rejections that were made in the Final Action dated August 11, 2008.

In the response filed December 10, 2008, to the Final Action of August 11, 2008, applicants submitted a declaration under 37 C.F.R. § 1.132 of Koichi DAN. In the response applicants argued that the Office has not shown that Aoyama, alone or as modified by Naylor and Kato as proposed by the Office, discloses a composition that contains less than 100 titanium-containing particles having an equivalent circular diameter of 1  $\mu$ m or more per 0.02 mg of the composition.

Applicants also explained that Table 1 of the DAN declaration showed that none of the compositions of the examples of Aoyama meet the limitation that the number of titanium-containing particles having an equivalent circular diameter of 1  $\mu$ m or more is less than

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100/0.02 mg of the composition, as required by the claims of the present application. Each of the compositions of Aoyama contains more than 300 titanium-containing particles, the equivalent circular diameter of which is 1  $\mu\text{m}$  or more, per 0.02 mg of the composition.

Additionally, applicants argued that the comparative data in the present application demonstrate criticalness for the number density of titanium-containing particles having an equivalent circular diameter of 1  $\mu\text{m}$  or more as recited in the claims and show that less than 100/0.02 mg of the polyester resin composition of titanium-containing particles having an equivalent circular diameter of 1  $\mu\text{m}$  or more is material to obtaining a composition having good castability and a reduced number of dropouts. (Referring to Comparative Examples 1 and 4 in Tables 1-1 and 1-2).

In a Submission under 37 C.F.R. § 1.114 filed with a Request for Continued Examination on January 12, 2009, applicants argued that the Office has failed to cite teachings in Aoyama or the prior art that would enable a person of ordinary skill in the art to modify the method of Aoyama so as to obtain a polyester resin composition which meets the particle size limitations of the claims of the present application.

In the current Action, in response to the arguments made by

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the applicants as explained above, the Office takes the position that the data of the DAN declaration "are irrelevant to the limitation of Claim as 'wherein the number of titanium-containing particles having an equivalent circular diameter of 1 micron or more is less than 100/0.02 mg of the composition' because no compounds with particle size more than 1 micron presented in Table." (Action, page 2, last paragraph, emphasis in original).

The Office also takes the position in the Action that the "data presented in Table 1-1 and 1-2 is not commensurate with scope of claims, because no actual size of particles presented by data and no examples with particles more than 1 micron (for example 100 microns) presented in Tables 1-1 and 1-2." (Action, page 5, line 2 from the bottom of the page, to page 6, line 2).

The Office further explains that the rationale for modifying Aoyama to obtain a polyester resin composition which meets the limitations of the claims of the application is that stated in the Advisory Action of December 2, 2008, i.e.:

"Aoyama recognized importance of small particle sizes less than 3 micron in order 'to achieve good slipperiness and adhesiveness at the time of lamination' - see column 6, lines 1-6. Thus, Aoyama provide rationale to one of ordinary skill to reduce particle size less than 3 micron

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in order to achieve good slipperiness and adhesiveness of the composition."

In order to obtain a clear understanding of the positions of the Office taken in the current Action as explained above, applicants' undersigned representative conducted a personal interview with the Examiner, Mr. Mesh, in charge of the application and his supervisor, Mr. Jagannathan, on June 24, 2009.

During the interview the Examiner's statement in the Action that the data in the 132 declaration of Koichi Dan are irrelevant "because no compounds with particle size more than 1 micron presented in Table" was first discussed. Mr. Jagannathan explained that this statement relates to the fact that although Table 1 in the declaration, in the second and fourth columns from the right, identifies a number of particles per 0.02 mg of the composition, there is nothing in the table itself (or stated clearly in the declaration) that identifies that the particles have an equivalent diameter of 1  $\mu$ m or more.

Second, regarding the Examiner's statement that Aoyama in Col. 6, lines 1-6, recognizes the importance of small particle sizes, the undersigned representative pointed out during the interview that the particles referred to in Col. 6 are the particles (X) used as a lubricant. The Examiners stated that this argument is not

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effective, however, because claim 1 recites "the number of titanium-containing particles" and does not limit the titanium-containing particles to any specific source and does not exclude particles added as a lubricant.

Mr. Mesh also noted during the interview that he strongly believes that an upper limit of the particles having an equivalent circular diameter of 1  $\mu\text{m}$  or more should be recited in the claims. Mr. Mesh stated that without such limitation, the claims read on limiting the number of particles of a very large size, for example 1000  $\mu\text{m}$ , per 0.02 mg of the composition. He stated that such large particles would be expected to affect the properties (e.g., drop-outs) of a film formed from the composition and, therefore, it would be obvious to limit the amount of such particles. Mr. Mesh also questioned the value of the comparative data in the application, which do not identify particle sizes, because the results of Comparative Examples 1 and 4 could be due to the presence of large particles and not the number of large particles.

The original declaration under 37 C.F.R. § 1.132 of Koichi DAN has been modified to properly identify that the number of particles described in the second and fourth columns from the right is the number of particles having an equivalent diameter of 1  $\mu\text{m}$  or more. The new declaration under 37 C.F.R. § 1.132 of Koichi DAN is

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submitted herewith.

The data of the new DAN declaration clearly demonstrate that none of the compositions of the examples of Aoyama meet the limitation of the claims of the application that the number of titanium-containing particles having an equivalent circular diameter of 1  $\mu\text{m}$  or more is less than 100/0.02 mg of the composition. Each of the compositions of Aoyama contains more than 300 titanium-containing particles, the equivalent circular diameter of which is 1  $\mu\text{m}$  or more, per 0.02 mg of the composition.

Moreover, no motivation is provided in the combined teachings of Aoyama, Naylor and Kato, or Aoyama, Naylor, Kato and Uchida to modify the compositions of Aoyama to provide less than 100 particles having an equivalent circular diameter of 1  $\mu\text{m}$  or more 100 per 0.02 mg of the compositions.

The teachings in Aoyama in Col. 6, lines 1-6, referred to by the Office in the Advisory Action dated December 22, 2008, that the particles of the lubricant should preferably have an average particle size of less than 3 micron in order 'to achieve good slipperiness and adhesiveness at the time of lamination' do not provide a motive to reduce the particle size of all titanium-containing particles in the compositions of Aoyama.

In this regard, the position of the Examiners explained during

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the interview on June 24, 2009, that applicants' argument that the particles referred to in Col. 6 are the particles (X) used as a lubricant is not effective because claim 1 recites "the number of titanium-containing particles" and does not limit the titanium-containing particles to any specific source and does not exclude particles added as a lubricant is not understood and is respectfully submitted to be irrelevant to the obviousness issue.

Although the limitation in the claim does not limit the titanium-containing particles to any specific source, the limitation does require that no titanium-containing particles of any source having an equivalent circular diameter of 1  $\mu\text{m}$  or more be present in the composition in an amount of more than 100 particles per 0.02 mg of the composition.

Reducing the size of the particles of lubricant in Aoyama will not result in a composition which meets the limitations of the claims of the application. This is demonstrated by the data of the DAN declaration. The compositions of Aoyama failed to satisfy the limitations of the claims of the application even when the particles of lubricant (particles (X)) were not added to the compositions. Please refer to the second column from the right in Table 1 of the DAN declaration.

Regarding the position of Mr. Mesh that an upper limit of the

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particles having an equivalent circular diameter of 1  $\mu\text{m}$  or more should be recited in the claims, no upper limit is required because in producing polyester film, particularly, polyester film for magnetic recording media, it is well known that the polyester resin composition is passed through a filter. Debris and degenerated resin are filtered off. (See page 58, lines 13-14, of the present specification). Thus, if the polyester resin composition includes very large particles, such particles are removed by the filter and do not affect the properties of the film. What affects the properties of the film is not the presence of very large particles, but the number of particles having an equivalent diameter of 1  $\mu\text{m}$  or more.

The polyester films of Comparative Example Nos. 1 and 4 of the present specification (and the compositions of the DAN declaration) were produced using such a filtering process. Therefore, the results shown by the data of these comparative examples is not due to the presence of very large particles, but is due to the large number of particles having an equivalent diameter of 1  $\mu\text{m}$  or more and demonstrate the unobviousness of the claimed polyester resin composition.

For these reasons, the combined teachings of Aoyama, Naylor and Kato, and of Aoyama, Naylor, Kato and Uchida are insufficient



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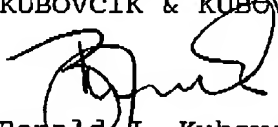
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to support the rejections of the claims under 35 U.S.C. § 103(a) and removal of the rejections is in order.

The foregoing is believed to be a complete and proper response to the Office Action dated March 30, 2009, and is believed to place this application in condition for allowance. If, however, minor issues remain that can be resolved by means of a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number indicated below.

In the event that this paper is not considered to be timely filed, applicants hereby petition for an appropriate extension of time. The fee for any such extension may be charged to our Deposit Account No. 111833. In the event any additional fees are required, please also charge our Deposit Account No. 111833.

Respectfully submitted,  
KUBOVCIK & KUBOVCIK



Ronald J. Kubovcik  
Reg. No. 25,401

Crystal Gateway 3  
Suite 1105  
1215 South Clark Street  
Arlington, VA 22202  
Tel: (703) 412-9494  
Fax: (703) 412-9345  
RJK/esc

Attachment: Declaration under 37 C.F.R. § 1.132 of Koichi DAN